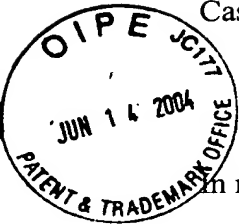


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P. Allen  
06/26/04



Case Docket No.: SN-US000610

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:

Yasushi NISHIMURA

Serial No.: 09/986,977

Filed: November 13, 2001

For: PAINT-COATED COMPONENTS

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Appeal No.: \_\_\_\_\_  
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Group Art Unit: 3654  
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Examiner: Evan H. Langdon  
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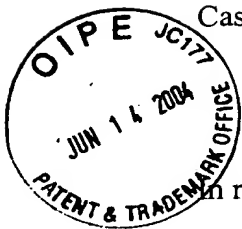
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## TABLE OF CONTENTS

1.	Status of Claims.....	3
2.	Status of Amendments.....	3
3.	Issues .....	4
4.	Arguments .....	4
	<b>Brief Summary of Arguments .....</b>	<b>5</b>
	<b>A. The Nanbu patent and the Manabe patent do not render obvious claims 15 and 17-20 under 35 U.S.C. §103. ....</b>	<b>5</b>
	<b>B. The Koike patent and the Manabe patent do not render obvious claims 15 and 16 under 35 U.S.C. §103.....</b>	<b>12</b>
9.	Conclusion .....	13
	APPENDIX A- COPY OF CLAIMS ON APPEAL (Before Entry of Amendment).....	15
	APPENDIX B- COPY OF CLAIMS ON APPEAL (After Entry of Amendment).....	17



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REPLY BRIEF ON APPEAL

Commissioner of Patents  
United States Patent and Trademark Office  
Washington, D.C. 20231

Sir:

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For the appeal to the Board of Patent Appeals and Interferences from the Examiner's  
Answer dated April 19, 2004 sustaining rejections to claims 15-19, Applicant-Appellant  
submits the following Reply Brief in accordance with 37 C.F.R. §1.193 (b)(1).

*1. Status of Claims*

Claims 15-20 are currently pending. In paragraph (3) of the Examiner's Answer, the  
rejection of claim 20 was withdrawn.

*2. Status of Amendments*

Appellant has filed herewith an Amendment to amend claim 20 in independent form  
including all of the limitations of the base claim and any intervening claims. Claims 15-19 of  
the present application have not been amended during the course of prosecution, and are not  
currently amended.

### ***3. Issues***

After the Examiner's Answer, claims 15-19 remain finally rejected in view of prior art. Specifically, claims 15, 17-19 stand rejected under §103 (a) as being unpatentable over Japanese Patent Application Publication 2001-017040 to Nanbu Kazuya ("Nanbu patent") in view of U.S. Patent No. 4,369,225 to Manabe et al. ("Manabe patent"), and claims 15-16 stand rejected under §103 (a) as being unpatentable over Japanese Patent Application Publication 11-206284 to Koike Mamoru ("Koike patent") in view of the Manabe patent.

The following issues are presented for review:

- (A) Whether claims 15, 17-19 are unpatentable over Japanese Patent Application Publication 2001-017040 to Nanbu Kazuya in view of U.S. Patent No. 4,369,225 to Manabe et al. under 35 U.S.C. §103.
- (B) Whether claims 15-16 are unpatentable over Japanese Patent Application Publication 11-206284 to Koike Mamoru in view of U.S. Patent No. 4,369,225 to Manabe et al. under 35 U.S.C. §103.

### ***4. Arguments***

The Examiner's Answer asserts that claims 15 and 17-19 are rendered obvious by the Nanbu patent and the Manabe patent, because the Nanbu patent shows a fishing reel of claim 15 (double bearing reel) except for the metal film layer providing a mirroring effect, and the Manabe patent shows a metal layer providing a mirroring effect as set forth in column 3, lines 14-24, 30-43, 67-68, in column 4, lines 1-3, and in column 5, lines 1-12. The Office Action

also asserts that claims 15 and 16 are rendered obvious by the Koike patent and the Manabe patent, because the Koike patent shows a fishing reel of claim 15 (spinning reel) except for the metal film layer providing a mirroring effect, and the Manabe patent shows a metal layer providing a mirroring effect.

In response, Appellant presents the following arguments:

#### BRIEF SUMMARY OF ARGUMENTS

- The Nanbu patent and the Manabe patent do not render obvious claims 15 and 17-19 under 35 U.S.C. §103.
- The Koike patent and the Manabe patent do not render obvious claims 15 and 16 under 35 U.S.C. §103.

The foregoing arguments are explained in more detail below.

**A. The Nanbu patent and the Manabe patent do not render obvious claims 15 and 17-19 under 35 U.S.C. §103.**

The Office Action of October 16, 2003 asserts that the metal film layer of the Manabe patent as applied to the fishing reel of the Nanbu patent renders the arrangement of claim 15 obvious. Appellant disagrees with this assertion because the metal film layer of the Manabe patent does *not* satisfy the requirement of claim 15.

***A-1. The metal film of the Manabe patent does not satisfy the ‘mirroring effect’ requirement of claim 15 of the present application.***

In the Response to Argument, the Examiner’s Answer asserts that the Appellant’s definition of “mirroring effect” as presented in the Appeal Brief is inconsistent with that of page 3, lines 9-13 of the specification, and that the definition as provided in the specification

is more consistent with the “metallic luster” taught by the Manabe patent. Appellant respectfully disagrees with the assertion of the Examiner’s Answer.

First of all, Appellant believes that the definition of the “mirroring effect” as presented in the Appeal Brief is *not* inconsistent with that of the specification. The definition provided in the Appeal Brief is a dictionary definition of the term “mirroring effect,” while the description provided in the specification defines the language “mirroring effect” in claim 15. In other words, the explanation in the Appeal Brief explains how the term “mirroring effect” should be interpreted generally according to a dictionary definition, while the specification does *not* provide any definition of the term “mirror” that conflicts with the ordinary and customary definition of “mirror” as defined by the dictionary. More specifically, the Appeal Brief on page 8 explains that the term “mirroring effect” should be generally interpreted as “a reflective that forms an optical image, as ‘mirror’ is defined as ‘a polished or smooth surface (as of glass) that forms images by reflection,’” *see Merriam Webster’s Collegiate Dictionary*, 10<sup>th</sup> ed. 743 (1993) (bracket in the original). On the other hand, the specification on page 3, lines 8-13 merely states:

Herein, in a certain position, the light is reflected on the ground coating, showing the tone of the paint, while in another position the light is reflected on the metal film layer due to the half-mirroring effect, showing a *metallic mirrored surface* with the hue of the ground coating. In this manner, the ground coating yields iridescent patterns, and the metal film layer yields a metallic mirrored surface, improving the appearance of the design. (Emphasis added.)

Appellant believes that this reference to “metallic mirrored effect” does not render the definition of the “mirror effect” inconsistent, because “mirrored” and “metallic” are not mutually exclusive concepts, and a surface can be both “mirrored” and “metallic” at the same time. As discussed on page 8 of the Appeal Brief, the “mirroring effect” indicates a reflective effect that forms an optical image, while “metallic luster” simply means an appearance of

metal that is rendered by reflection of light. In other words, while most mirrored surfaces may have metallic appearance, not all metallic surfaces have a mirroring effect of creating an optical image by reflection.

Therefore, the term “metallic mirrored effect” on page 3 of the specification merely means that the surface provided by the metal film means of claim 15 provides a **both** metallic and mirrored appearance. In other words, the “mirroring effect” as defined in claim 15 of the present application is limited to surfaces that are both mirrored (as defined by the Appeal Brief) and metallic.

On the other hand, the Manabe patent does not teach or suggest a metal film that has mirroring effect. The Manabe patent basically teaches rendering metallic appearance to a surface of resinous member through sputtering. There is **no** disclosure or suggestion as to how to render the resinous surface mirrored **as well as** metallic. Accordingly, the Manabe patent does not teach or suggest metal film means for providing a mirroring effect as defined in claim 15.

***A-2. The Manabe patent teaches away from providing a semi transparent metal film layer.***

The Examiner’s Answer in Response to Argument seems to assert that the metal film of the Manabe patent must be semi-transparent. Appellant in response continues to assert that the Manabe patent teaches away from providing a semi-transparent metal film layer. Appellant also believes that the assertion regarding the thickness of the metal film in the Examiner’s Answer is misplaced because a person of ordinary skill would construe that the metal film of the Manabe patent is thick enough **not** to be seen through based on the description of the Manabe patent.

The Manabe patent in column 6, lines 10-14 states as follows:

The thickness of the metal film is generally limited within the range of 150-500Å. If the thickness of the metal film is less than 150Å, the coverage of the metal film is insufficient so that the substrate can be seen through the metal film.

Clearly, the Manabe patent suggests that the thickness of the metal film layer be limited within the range of 150-500Å because the substrate can be seen through if the thickness is less than 150Å. In view of the discouragement not to render the metal film layer too thin, a person of ordinary skill would be, upon reading the Manabe patent, motivated to form a metal film layer thick enough so that the ground coating layer cannot be seen through the metal film layer. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be led in a direction divergent from the path that was taken by the applicant.” *See Tech Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1360, 52 USPQ2d 1294, 1298 (Fed. Cir. 1999). Thus, the Manabe patent clearly teaches away from forming the metal film layer semi-transparent.

Accordingly, Appellant believes that the combination of the Nanbu patent and the Manabe patent does not anticipate or render obvious the arrangement of claim 15, because the Manabe patent teaches away from the claimed invention in a material respect. Numerous cases hold that a prima facie case of obviousness can be rebutted by showing that the prior art teaches away from the claimed invention in any material aspect. *See In re Peterson*, 315 F.3d 3125, 1331, 65 USPQ2d 1379 (Fed. Cir. 2003) (“an applicant may rebut a prima facie case of obviousness by showing that the prior art teaches away from the claimed invention in any material respect”); *see also In re Haruna*, 249 F.3d 1327, 1335, 58 USPQ2d 1517 (Fed. Cir. 2001) (“A prima facie case of obviousness can be rebutted if the applicant ... can show that the art in any material aspect taught away from the claimed invention.”). Appellant believes that the Manabe patent teaches away from the claimed invention in a material respect.

Here, Appellant believes that the requirement that the metal film be semi-transparent is a material aspect of the present invention. Claim 15 clearly requires that the metal film



means be semi-transparent. The language "semi-transparent" is defined on page 3, lines 2-11 of the specification as:

Herein, to "adjust the metal with a half-transparency" means to vary the proportion of the ground film-layer that is masked, by adjusting the thickness of the metal film layer. In this case, adjusting the proportion as one of 50%, 25%, 15% and 5%—i.e., making the ground film-layer masking rate to be one of the aforementioned proportions—is preferable, since the light can pass through the metal film layer, and the ground film-layer can be visually recognized. Herein, in a certain position, the light is reflected on the ground coating, showing the tone of the paint, while in another position the light is reflected on the metal film layer due to the half-mirroring effect, showing a metallic mirrored surface with the hue of the ground coating.

Furthermore, the specification on page 3, lines 12-14 states that the present invention improves the appearance of the design because of the combination of the iridescent patterns of the ground coating and the metallic mirrored effect of the metal film layer. Thus, the semi-transparency of the metal film means is clearly a material aspect of the present invention. Accordingly, the Nanbu patent and the Manabe patent in combination do not anticipate or render obvious the arrangement of claims 15, since the Manabe patent teaches away the arrangement of the claim in a material respect.

Additionally, Appellant specifically disagrees with the interpretation of the Manabe patent of the Examiner's Answer and believes that the Examiner's Answer's assertion regarding the thickness of the metal film layer is misplaced. More specifically, on page 6 of the Examiner's Answer, it is stated that:

The applicant is suggesting that at 149 angstroms the film layer is totally transparent and at 151 angstroms that film layer is dense so that an observer could not see through it. The term used is insufficient, another term of degree. Through the range of 150-500 angstroms, as taught by Manabe et al., the film layer is semi-transparent.

Appellant specifically disagrees that the Appellant suggests that the film layer at 149Å is totally transparent while the film layer at 151Å could not be seen through. It was *the*

***Manabe patent, not the Appellant*** that described that the metal film layer at the range of 150-500Å cannot be seen through, while the metal film layer at less than 150Å is somewhat transparent (note that total transparency is not required here) so that the substrate can be seen through the metal film layer. The Appellant merely relied on this description of the Manabe patent to make explain that the Manabe patent teaches away from providing semitransparent film layer.

The Examiner's Answer seems to allege that the metal film layer of the Manabe patent must be thick enough not to be seen through only because the terms "semi-transparent" and "insufficient" are relative terms of degree. Even though the terms "semi-transparent" and "insufficient" are terms of degree as asserted by the Examiner's Answer, there is no disclosure or suggestion in the Manabe patent to infer that the metal film layer of the Manabe patent must be semi-transparent at the range of 150-500Å. Such an inference is particularly misplaced when the Manabe patent clearly requires that thickness of the metal film layer be in the range of 150-500Å so that the metal film layer ***cannot be seen through***. In order to construe the Manabe patent to mean that the metal film layer at the range of 150-500Å is semi-transparent, there must be a tertiary reference that teaches that a metal film layer as taught by the Manabe patent must be semi-transparent at the range of 150-500Å. In the absence of such reference, the metal film layer of the Manabe patent must be thick enough at the range of 150-500Å so as not to be seen through (i.e., non-transparent), because that is what the Manabe patent teaches to one skilled in the art.

In view of the above comments, Appellant believes that the Manabe patent teaches away from providing the metal film layer semi-transparent, and thus does not anticipate or render obvious the arrangement of claim 15, whether taken singularly or in combination with the Nanbu patent.

**A-3. The thickness of the metal film means of claim 15 is not limited to 50-600 Å**

In response to Appellant's argument that the thickness of the metal film means should not be interpreted to be 50-600Å, the Examiner's Answer simply repeats the assertion made in the prior Office Actions, which is that the thickness of the metal film layer of the Manabe patent fits the thickness of the metal film means of the embodiment of the present application. Appellant believes that the assertion of the Examiner's Answer is misplaced. More specifically, although the Examiner's Answer seems to have interpreted the Appellant's argument in the Appeal Brief as being that the range of the metal film layer of the present application is different from that of the Answer patent, this was not what Appellant has argued. Rather, Appellant argued that the thickness of the metal film means of claim 15 should not be interpreted to be limited to the range of 50-600Å.

Specifically, the Examiner's Answer seems to read in the limitation of the thickness range that is presented as an example only in the embodiment. While the specification in the embodiment states that the thickness of the metal film layer 3 is 50-600Å, it also states unequivocally that the thickness range of the metal film layer of the present invention is not limited thereto, and that the thickness of the metal film layer depends on the type of metal that is used as the target. That is, page 6, lines 22-30 of the specification states:

The thickness by which a mirroring effect is yielded varies depending upon the type of paint in the ground coating 12. In cases where the ground coating 12 is metallic paint, for example, even though the metal film layer 13 is layered to the same film thickness, the conditions under which the mirroring effect occurs will differ between the case where coarse metallic powder is utilized and a case where fine metallic powder is utilized. ***The film thickness of the metal film layer 13 is therefore not limited to the aforementioned 600-50 angstroms range.*** Furthermore, the ***film thickness*** that will bring out a semitransparent mirroring effect will ***differ depending on the type of metal used as the target.*** (Emphasis added.)

It is generally held that in interpreting a means-plus-function phrase under 35 U.S.C. 112, paragraph 6, the specification should be relied on to determine the scope of the claim.

*See e.g., Kahn v. General Motors Corp.*, 135 F.3d 1472, 1476, 45 USPQ2d 1608, 1611 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 875 (1998) (stating that “[u]nlike the ordinary situation in which claims may not be limited by functions or elements disclosed in the specification, but not included in the claims themselves, in writing a claim in means-plus-function form, a party is limited to the corresponding structure disclosed in the specification and its equivalents”). Particularly, when the specification discloses more than one embodiment, all of the structures disclosed that perform the function of the means should be included as the corresponding structure. *See Micro Chemical, Inc. v. Great Plains Chemical Co.*, 194 F.3d 1250, 1258, 52 USPQ2d 1264 (Fed. Cir. 1999) (stating that “[w]hen multiple embodiments in the specification correspond to the claimed function, proper application of §112, ¶6 generally reads the claim element to embrace each of those embodiments”); *see also Serrano v. Telular Corp.*, 111 F.3d 1578, 42, USPQ2d 1538 (Fed. Cir. 1997) (holding that corresponding structure included both the preferred embodiment and an explicitly disclose alternative). A structure disclosed in the specification is only deemed to be “corresponding structure” if the specification clearly links or associates the structure to the function recited in the claims. *Kahn*, 135 F.3d at 1476, 45 USPQ2d at 1611. In the present case, the thickness of the metal film layer is clearly associated with the function of the metal film means, which is to provide a mirroring effect and semi-transparency. Since the specification clearly sets forth that the metal film thickness is *not* limited to the 50-600Å range, “metal film means” of claim 15 should be interpreted to include any thickness of metal film layer that provides the mirroring effect and is semi-transparent.

Accordingly, Appellant believes that the thickness of the metal film means should not be interpreted to be limited to the 50-600Å range.

***A-4. The Nanbu patent in combination with the Manabe patent fails to show or suggest the metal film means as set forth in claim 15 of the present application.***

Regarding the Nanbu patent, the Office Action of October 16, 2003 acknowledges that the Nanbu patent fails to show a ground film-layer that is formed by a paint coat and a metal film layer that provides a mirror effect and is formed semitransparently.

Regarding the Manabe patent, as discussed in sections A-1 and A-2 of this Brief, the Manabe patent does ***not*** disclose or suggest a metal film layer that has mirroring effect, and also ***discourages*** rendering the metal film layer semi transparent. Furthermore, the thickness range of the metal film means provided in the specification that overlaps with the thickness range of the Manabe patent is provided only as an example, and should not limit the metal film layer as defined in claim 15 to that range. Also, regardless of whether the physical thickness of the metal film means of the present invention is the same as that of metal film layer of the Manabe patent, a person of ordinary skill in the art would not be able to arrive at the present invention by combining the teachings of the Manabe patent and the Nanbu patent, because the Manabe patent does not disclose or suggest metal film means that provides mirroring effect and semi-transparency.

In view of the above comment, Appellant respectfully asserts that the Nanbu patent in combination with the Manabe patent does not render obvious claim 15 of the present application under 35 U.S.C. §103.

**B. The Koike patent and the Manabe patent do not render obvious claims 15 and 16 under 35 U.S.C. §103.**

The Office Action of October 16, 2003 asserts that the metal film layer of the Manabe patent as applied to the fishing reel of the Koike patent renders the arrangement of claim 15

obvious. Appellant disagrees with this assertion because the metal film layer of the Manabe patent does *not* satisfy the requirement of claim 15.

Regarding the Koike patent, the Office Action of October 16, 2003 acknowledges that the Koike patent fails to show a ground film-layer that is formed by a paint coat and a metal film layer that provides a mirroring effect and is formed semi-transparently.


Regarding the Manabe patent, the metal film layer of the Manabe patent does not disclose or suggest the metal film means as defined in claim 15, as discussed in sections A-1 through A-3 of this Brief. Thus, a person of ordinary skill in the art would not be able to arrive at the present invention by combining the teachings of the Manabe patent and the Koike patent.

In view of the above comment, Appellant respectfully asserts that the Koike patent in combination with the Manabe patent does not render obvious claim 15 of the present application under 35 U.S.C. §103.

## **9. Conclusion**

In view of the above analysis of claims 15-19, Appellant believes that the claims 15 and 17-19 are not rendered obvious by Japanese Patent Application Publication 2001-017040 to Nanbu Kazuya and U.S. Patent No. 4,369,225 to Manabe et al. under 35 U.S.C. §103. Also, the claims 15-16 are not rendered obvious by the Japanese Patent Application Publication 11-206284 to Koike Mamoru in view of U.S. Patent No. 4,369,225 to Manabe et al. Thus, Appellant respectfully requests that the rejections of claims 15-19 be reversed, and that claims 15-19 be allowed. If there are any questions regarding this Brief, please feel free to contact the undersigned.

Respectfully submitted,

  
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**APPENDIX A**  
**COPY OF CLAIMS ON APPEAL**  
**(BEFORE ENTRY OF AMENDMENT)**

15. A fishing reel, comprising:  
a reel body, including  
a component body,  
a ground film-layer formed by a paint coat on an obverse-layer side of said component body, and  
metal film means for providing a mirroring effect, said metal film means being formed semitransparently on an obverse-layer side of said ground film-layer;  
a handle assembly disposed on a side of said reel body; and  
a line-winding spool removably and reattachably fitted to said reel body.
16. The fishing reel as set forth in claim 15, wherein  
said fishing reel is a spinning reel and further comprises a rotor rotatably fitted to said reel body, and  
said spool can move reciprocatingly with respect to said reel body.
17. The fishing reel as set forth in claim 15, wherein  
said fishing reel is a dual bearing reel, and  
said spool is rotatably fitted to said reel body.
18. The fishing reel as set forth in claim 15, wherein  
said metal film means is formed by metal vapor deposition, and contains any one of chrome, nickel, zinc, magnesium, aluminum, a stainless steel alloy, and titanium.



19. The fishing reel as set forth in claim 15, further comprising  
a protective film layer formed by a clear paint coat on an obverse-layer side of said  
metal film means.

20. The fishing reel as set forth in claim 15, further comprising  
an anodized film layer formed in between said component body and ground film-layer  
by anodizing,  
said component body of said reel being formed from at least one of aluminum alloy  
and magnesium alloy.

**APPENDIX B**  
**COPY OF CLAIMS ON APPEAL**  
**(AFTER ENTRY OF AMENDMENT)**

15. A fishing reel, comprising:  
a reel body, including  
a component body,  
a ground film-layer formed by a paint coat on an obverse-layer side of said component body, and  
metal film means for providing a mirroring effect, said metal film means being formed semitransparently on an obverse-layer side of said ground film-layer;  
a handle assembly disposed on a side of said reel body; and  
a line-winding spool removably and reattachably fitted to said reel body.
16. The fishing reel as set forth in claim 15, wherein  
said fishing reel is a spinning reel and further comprises a rotor rotatably fitted to said reel body, and  
said spool can move reciprocatingly with respect to said reel body.
17. The fishing reel as set forth in claim 15, wherein  
said fishing reel is a dual bearing reel, and  
said spool is rotatably fitted to said reel body.
18. The fishing reel as set forth in claim 15, wherein

said metal film means is formed by metal vapor deposition, and contains any one of chrome, nickel, zinc, magnesium, aluminum, a stainless steel alloy, and titanium.

19. The fishing reel as set forth in claim 15, further comprising  
a protective film layer formed by a clear paint coat on an obverse-layer side of said metal film means.

20. A fishing reel, comprising:

a reel body, including

a component body,

a ground film-layer formed by a paint coat on an obverse-layer side of said component body, and

metal film means for providing a mirroring effect, said metal film means being formed semitransparently on an obverse-layer side of said ground film-layer;  
a handle assembly disposed on a side of said reel body;  
a line-winding spool removably and reattachably fitted to said reel body; and  
an anodized film layer formed in between said component body and ground film-layer by anodizing,

said component body of said reel being formed from at least one of aluminum alloy and magnesium alloy.